

Newsletter

Week of March 27, 2006

Vol. 7, No. 7

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 University of California Laboratory employees should have begun receiving their employment-offer package from Los Alamos National Security, LLC, as well as a guide from the University of California for making retirement and benefits decisions. ... **Page 3**

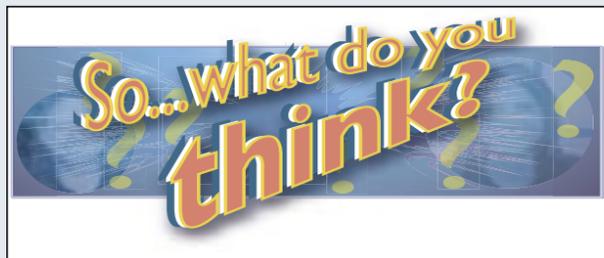


Lujan Neutron Scattering Center celebrates record-breaking run cycle
 The Manuel Lujan Jr. Neutron Scattering Center

at the Laboratory recently celebrated its most successful year in its 19-year history. "We hosted [more than] 700 researchers in 2005 between early February and late December when we ceased operations for scheduled maintenance," said Alan Hurd, the Lujan Center director. **Pages 4 and 5**

Workshop emphasizes a choice and passion for science

Young women in Northern New Mexico discovered the possibilities that science, engineering, math and technology offer them during the annual Expand Your Horizons Workshop at the University of New Mexico, Los Alamos. The annual conference was co-sponsored by the Laboratory, Los Alamos Women in Science and UNM-LA. **Page 8**



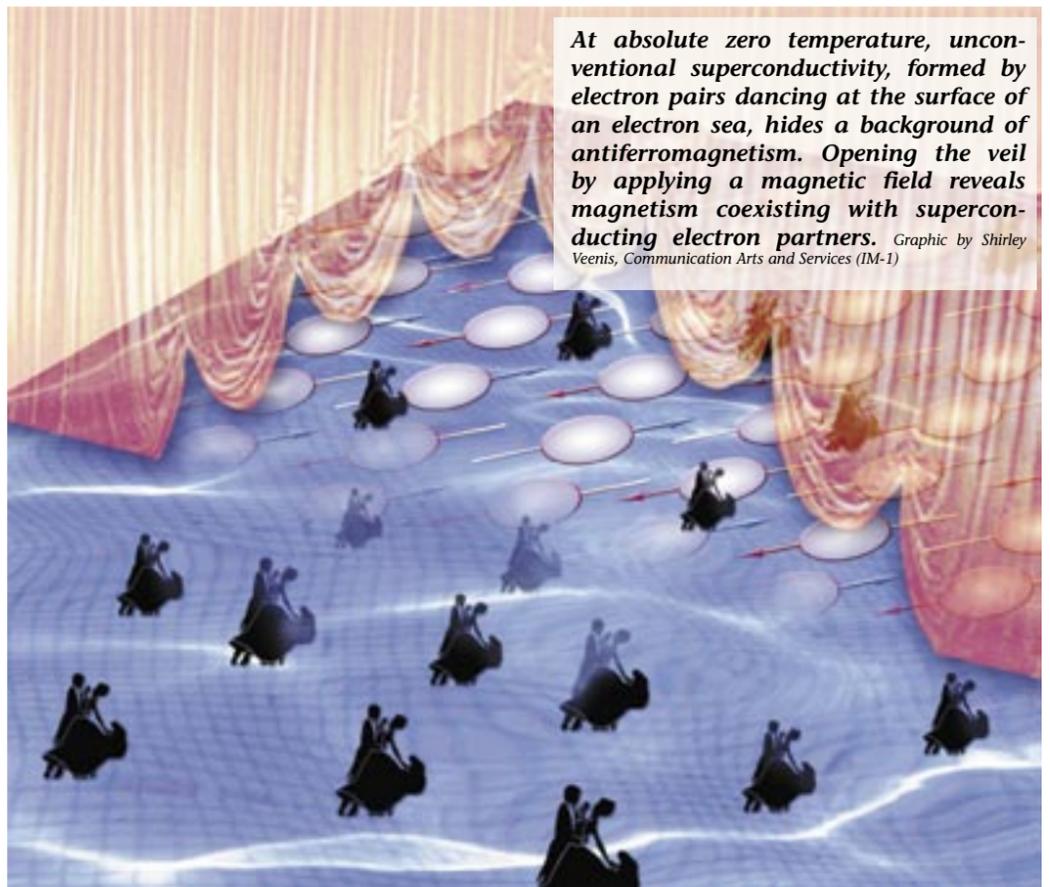
How closely have you been following the transition activities leading up to Los Alamos National Security, LLC taking over the Lab's management contract on June 1? What interests you most so far — the benefits package discussions, the Lab's organizational structure, etc. — and why? Learn what your co-workers had to say on Page 6.



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At absolute zero temperature, unconventional superconductivity, formed by electron pairs dancing at the surface of an electron sea, hides a background of antiferromagnetism. Opening the veil by applying a magnetic field reveals magnetism coexisting with superconducting electron partners. Graphic by Shirley Veenis, Communication Arts and Services (IM-1)

Research reveals hidden magnetism in superconductivity

By Todd Hanson

While studying a compound made of the elements cerium- rhodium-indium, researchers at the Laboratory and the University of Illinois at Urbana-Champaign have discovered that a magnetic state can coexist with superconductivity in a specific temperature and pressure range. The discovery is a step toward a deeper understanding of how nature is organized in regimes ranging from the fabric of the cosmos to the most fundamental components of elementary particles.

In research published recently in the scientific journal Nature, Los Alamos scientists Tucson Park and Joe D. Thompson, both of Condensed Matter and Thermal Physics (MST-10), and their colleagues describe the discovery of hidden magnetism in the CeRhIn5 compound. In studying the compound, researchers found that a purely unconventional superconducting phase is separated from a phase of coexisting magnetism and unconventional superconductivity, with the boundary between these two phases controlled by the laws of quantum physics.

Unconventional superconductors are materials that exhibit superconductivity, a complete absence of electrical resistance under cold temperatures, but use exotic mechanisms. Conventional wisdom has long held that the magnetism is excluded as materials change phases, but the researchers now show that it is merely hidden by unconventional superconductivity and can be made to reappear in the presence of an applied magnetic field.

"This discovery provides an exciting opportunity to better understand how magnetism and unconventional superconductivity are related in more-complex materials and may reveal more about the technologically important field of high temperature superconductors," said Thompson.

At low temperatures, electrons in a metal can pair with each other to create superconductivity, align in a magnetically ordered state, or do neither. Until recently, these mutually exclusive options for electrons were the norm, but the discovery of complex electronic materials like CeRhIn5, which can sustain more exotic forms of superconductivity, now shows that electrons can participate simultaneously in magnetism and superconductivity.

In addition to Park and Thompson, the research team included Filip Ronning and Roman Movshovich both of MST-10, John Sarrao of Materials Science and Technology (MST), along with Huiqiu Yuan and Myron Salamon, from the University of Illinois at Urbana-Champaign.

The work was supported by the Department of Energy's Office of Basic Energy Sciences and the National Science Foundation.



Watch for falling trees

Because of the mild winter weather, fieldwork still is an everyday thing for many Laboratory workers. Employees need to pay special attention to potential hazards such as falling trees and limbs.

Dead and dying trees pose a special danger for field workers or for anyone working or hiking away from developed areas. The dead trees in all the technical areas, killed by bark beetles, fire or drought, have an increasing potential to fall.

Because of bugs and larvae eating through the trees and the roots rotting off, many of the dead trees also pose a significant tripping hazard. Branches, too, are more likely to come down even in a mild wind, and entire trees can snap a few feet above the ground and topple.

The Environmental Stewardship (ENV) Division's General Field Safety for All Employees document has a section dedicated specifically to working near burned, dead or dying trees. Employees can review the document at <http://em.lanl.gov/Downloads/Controlled/RRES-ES-Field-RO.pdf> online.

Follow up to the March 9 all-hands meeting

Editor's note: At a March 9 all-hands meeting, Mike Anastasio, Los Alamos National Security, LLC president and designated director of the Laboratory, rolled out the LANS organizational structure for the Laboratory. Below is a message from Anastasio summarizing the message he presented.

On Thursday, March 9, I set forth the new organizational structure of the Laboratory. This presentation was another in a series of updates about the approach taken by Los Alamos National Security, LLC to lead the Laboratory into the future as an outstanding national security science laboratory. This organizational structure will better allow the Lab to bring its expertise to bear on the nation's problems both today and into the future. It will allow us to continue to create and advance unparalleled scientific breakthroughs, while anticipating our nation's future needs. This summary is meant to provide some context for the viewgraphs (http://transition-int.lanl.gov/docs/3-9-06_LANS_Pres_Rev4.pdf) used in my presentation.

In my first talk (http://int.lanl.gov/memos/2006/01/LANL_ALL1011.PDF) I set out that LANS is a seamless business entity, comprised of four parent organizations, for the sole purpose of managing the Laboratory. We are a fully integrated company with each parent organization contributing people, systems and expertise to furthering the Lab's mission.

You will recall that a board of governors, which has empowered me as the Laboratory director with the responsibility and authority to manage the Laboratory, governs LANS. Ultimately, the board has three major duties: (1) oversight of me as president of LANS; (2) delivery of best practices; and (3) reach-back to parent organizations for resources as needed for us to complete our mission. As director, I have redefined the organization of the Lab with the following three goals in mind: (1) to facilitate Labwide integration for the accomplishment of our near- and long-term missions; (2) to increase efficiency and flexibility by streamlining communications, empowering employees and eliminating organizational obstacles; and (3) to empower strong, hands-on, technical leaders who have the technical expertise and vision in their fields to lead an effective, creative organization and form multidisciplinary teams for execution.

In my presentation, I referred to this model as a modified matrix, by which program leaders draw on specialized, technical experts from their own organizations as well as professional resources and subject matter experts from across the institution. With this integration, we will see the elimination of shadow functions and organizations, thereby creating a more efficient Laboratory.

A key to this model is the establishment of three principal associate directors. This represents a change from my first discussion with you in February when I identified two PADs. I have now added a PAD for science, technology and engineering. This brings a higher level of focus to the science vision (http://int.lanl.gov/memos/2006/02/LANL_ALL1027.pdf) that I recently discussed with you and is partly in response to suggestions made by many of you in my recent discussions around the Laboratory.

The PADs are tasked with integrating and prioritizing within their areas of responsibility; representing the Laboratory to the outside world; and working with incoming Deputy Laboratory Director John Mitchell and me to shape and implement a balanced, focused strategy for the Lab. They will ensure all components (science, program and operations) of the Lab are vigorously represented in all of our decisions (see slides 4, 5, 6, 9 and 11).

Also critical to this model are the associate directors who execute their line management through the division structure (slides 7, 10 and 12). They are the technical leaders and line managers of the Lab with manageable spans of control who represent all the key Lab-focus areas necessary to implement our Laboratory vision. They will lead each of you, modeling the behaviors and values we expect of everyone and empowering you to perform at your best. Their leadership and your efforts will demonstrate we are more than just the sum of our parts making us truly a national laboratory. Like the PADs, you see another change in this area with two new ADs in the area of science (http://transition-int.lanl.gov/docs/3-9-06_LANS_Pres_Rev4.pdf).

I recognize this model represents significant change for many of you. However, I am convinced that this organizational structure embodies the principles of integration, balance and efficiency. It will allow us to meet the needs of the country today while anticipating the needs of the future. It also will empower you to do what you came to the Lab to do — to utilize and develop your capabilities in order to address the important issues of our times for the country.

I also recognize that there is a significant amount of detail that my talk and the attached charts do not cover. Accordingly, ADs will be visiting with you over the next several days explaining each of their organizations in detail.

I look forward to visiting with you at future talks regarding business, operations, mission and programs.



Laboratory Director Bob Kuckuck and Los Alamos National Security, LLC President and Laboratory Director Designate Michael Anastasio talk before an all-employee meeting, where Anastasio unveiled LANS' proposed organizational structure for the Laboratory. Anastasio used viewgraphs to illustrate organizational changes planned by LANS, which takes over the management and operations of the Laboratory from the University of California on June 1. Photo by LeRoy N. Sanchez

Los Alamos National Security NewsLetter

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Los Alamos National Laboratory is operated by the University of California for the National Nuclear Security Administration (NNSA) of the U.S. Department of Energy and works in partnership with NNSA's Sandia and Lawrence Livermore national laboratories to support NNSA in its mission.

Los Alamos enhances global security by ensuring safety and confidence in the U.S. nuclear stockpile, developing technologies to reduce threats from weapons of mass destruction and improving the environmental and nuclear materials legacy of the Cold War. Los Alamos' capabilities assist the nation in addressing energy, environment, infrastructure and biological security problems.



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Employees reminded about employment packages from UC, LANS

by James E. Rickman

University of California Laboratory employees should have received their employment-offer packages from Los Alamos National Security, LLC, as well as a guide from the University of California for making retirement and benefits decisions.

UC Lab employees were mailed an employment package containing

- a cover sheet with a table of contents;
- a letter from Lab Director Bob Kuckuck;
- a UC Decision Form;
- a welcome letter from Mike Anastasio, LANS president and Laboratory director-designate;

- and five LANS employment documents:
 - a LANS Offer Letter
 - a LANS Offer Acceptance Form;
 - a LANS Total Compensation Package Election Form;
 - a LANS Employment Form;
 - Internal Revenue Service Tax Form W-4.

About the same time that employees receive their LANS package, UC Lab employees also will receive a Decision Guide for [Laboratory] Employees from UC to assist them in making employment decisions.

The UC Decision Guide provides information about the University of California Retirement Plan (UCRP) and other benefits that employees will need to consider before the current Laboratory contract ends on May 31, 2006, said Lynn Boland, Human Resources (HR) Division acting leader.

University of California Lab employees who have not received their LANS packages should contact the LANS Transition Hotline at 1-888-505-9292.

Employees are encouraged to return required documents to LANS as soon as possible, but no later than May 15, 2006, upon deciding whether to accept LANS employment.

Features of the employment offer package

In addition to the cover sheet/table of contents and the welcome letter, the employment offer package contains the following:

- Letter from Director Kuckuck: This letter officially notifies employees that their Laboratory employment under the University of California ends on May 31, 2006.

- UC Decision Form: This form offers choices to current employees depending on whether they are vested in UCRP as of May 31, 2006. Vested employees must choose whether to retire from UCRP; become an inactive, vested member of UCRP and transfer employment benefits to LANS; or transfer UCRP service credit to LANS Total Compensation Plan 1.

Employees who are not vested must acknowledge that they understand that they are not vested in UCRP and will select LANS Total Compensation Plan 1 or 2 if they accept a position with LANS. Employees should ensure that their selection on this form matches the selection

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Regents act to reinstate contributions to ensure long-term stability of UCRP



On Thursday, March 16, the University of California Board of Regents approved a series of actions aimed at ensuring the stability of the UC Retirement Plan,

including resumption of UCRP contributions effective July 2007.

In a letter to LANL employees dated March 9, 2006, UC Vice President for Laboratory Management S. Robert Foley said, "As the proposed effective date is after the transition date to LANS, and since LANL employees who transfer to the new contractor will no longer be active members of UCRP at that time, they will not be directly impacted. In addition, the proposed action to reinstate contributions will not affect retirees or LANL employees who choose to go inactive during the transition."

The Regents asked for a July 2007 start date and a multi-year contribution strategy in which contribution rates will increase gradually over time.

Both the University and UC employees will be asked to make contributions for the ongoing funding of the UCRP for the first time since the early 1990s.

For represented employees, the reinstatement of contributions to the UCRP is subject to the collective bargaining process. Reinstatement of contributions also is subject to the availability of funding and completion of the state budget process.

Keeping the UCRP fully funded ensures future retirement benefits for all UCRP members and avoids the funding problems that have affected so many other pension plans across the nation.

The Regents are expected to hear specific recommendations as to how costs will be shared between active UCRP members and the University, possibly as soon as the May 2006 Regents meeting.

To stay informed, go to UC's special Web site, "The Future of the UC Retirement Plan," at www.universityofcalifornia.edu/news/ucrpfuture/welcome.html online which is updated with the latest information. The site also is accessible via the At Your Service Web site at atyour.service.ucop.edu/ online.

Site Office, Lab discuss Appendix F performance areas, concerns in FY 06

by Bill Wadt, Prime Contract Office (PCO) leader

The Los Alamos Site Office of the National Nuclear Security Administration is generally pleased with the Laboratory's progress in meeting Appendix F objectives this fiscal year, but expressed concern about the Lab's progress in some areas.

Laboratory, University of California and LASO representatives met recently, the first of three meetings scheduled to discuss the Lab's Appendix F performance. This meeting is part of making the Lab's Contractor Assurance System transparent to the site office.

During this shortened Appendix F performance period (through May 31), the Laboratory is being measured against three Appendix F objectives: mission, compliance and transition.

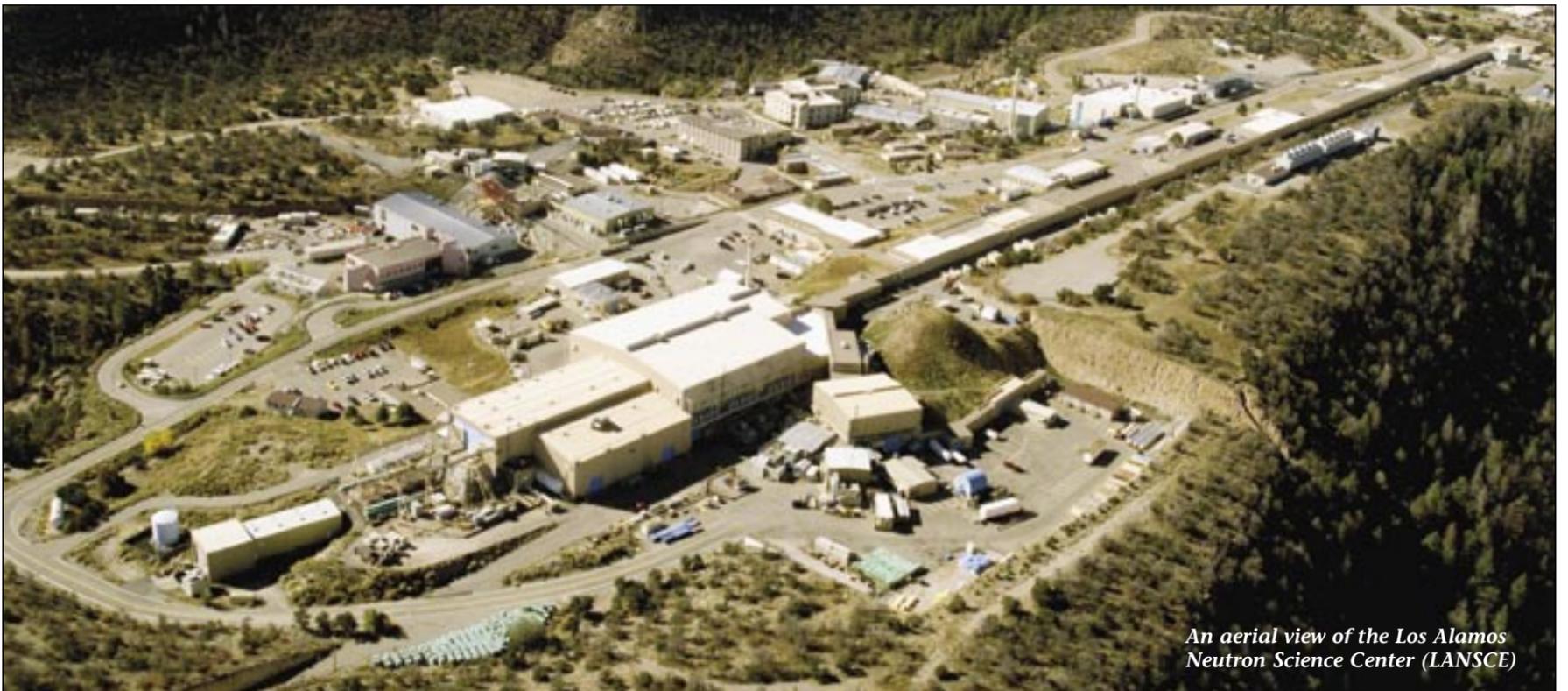
Objective 1 includes performance on the weapons mission and the weapons infrastructure that supports it as well as on the threat reduction and science, engineering and technology missions. NNSA is generally pleased with the way the Laboratory is sustaining its performance on Objective 1 that garnered an outstanding rating from NNSA in fiscal year 2005.

Budget cuts in fiscal year 2006 are a major issue. The Laboratory is working with NNSA headquarters on a budget-driven re-baseline of mission milestones. The Laboratory is working to shift people from areas that are under-funded to areas of need and growth, especially in threat reduction and strategic research. Budget constraints also are affecting the progress we're making in improving maintenance performance. LASO concurred with the concerns we identified and are addressing associated with construction projects that are on the Department of Energy deputy secretary's watch list. The site office singled out our work on reducing threats at megaports as outstanding.

Overall performance under Objective 2 on compliance remains satisfactory. LASO commended the extensive efforts of the work force in meeting many challenges. Performance in security and compliance with the New Mexico Consent Order is good to outstanding. However, Laboratory performance in safety, Resource Conservation and Recovery Act trends, safety authorization basis, procurement and the Enterprise Project are a continuing concern to the site office.

The careful planning that the Laboratory did early in the year for transition [to a new management and operations contractor] is reflected in LASO's concurrence that our performance for Objective 3 to date is outstanding. Cooperation and communication among the Laboratory, Los Alamos National Security, LLC and LASO are working well. All agreed that safety of the work force is paramount during this transition period and are very concerned that uncertainties, which are a normal consequence of any transition, could be a distraction from the safe performance of our commitments in mission and operations.

This Appendix F briefing will be followed by two more meetings with LASO on April 13 and May 31. The results of these meetings, as well as the presentations at the weekly Director's Institutional Portfolio Reviews and the Division and Program Review Committees' final reports will provide a sound basis for the final rating of the Lab's performance for the shortened Appendix F period.



An aerial view of the Los Alamos Neutron Science Center (LANSCE)

Lujan Neutron Scattering Center celebrates record-breaking run cycle

“We hosted [more than] 700 researchers in 2005 between early February and late December when we ceased operations for scheduled maintenance,” said Alan Hurd, the Manuel Lujan Jr. Neutron Scattering Center director. “Our previous record was about 540 researchers in 2003-2004, so we’re really doing great. Even with some challenges last year, we were able to operate 24 hours a day for 174 days — which also is a record for us. That’s almost a year and a half of normal workdays packed into just half a year. It’s been a team effort, and the support’s been wonderful.”

The Lujan Center is a Department of Energy, Office of Basic Energy Sciences

designated national user facility, serving top researchers from around the world who need powerful beams of neutrons to conduct experiments on a wide range of materials.

The center is highly complex and has 14 different instruments, which are operated and used simultaneously. These instruments allow researchers to peer into the structure of materials.

“We have the capability to actually see how materials are built at the atomic level, and what makes them behave the way they do. This is critical information, because with it we have the potential to build brand new materials to our specifications — ‘designer

materials,’ if you will,” Hurd said. “These are the kinds of new custom materials we’ll need in the 21st century to explore space, become more energy independent, advance medicine, improve our national security and clean up the environment.” Over half of the researchers are between the ages of 20 and 40. “It’s a new generation of scientists looking to the future, and they see the future in materials research and development,” Hurd explained. “The future looks quite exciting as we received 241 proposals for the

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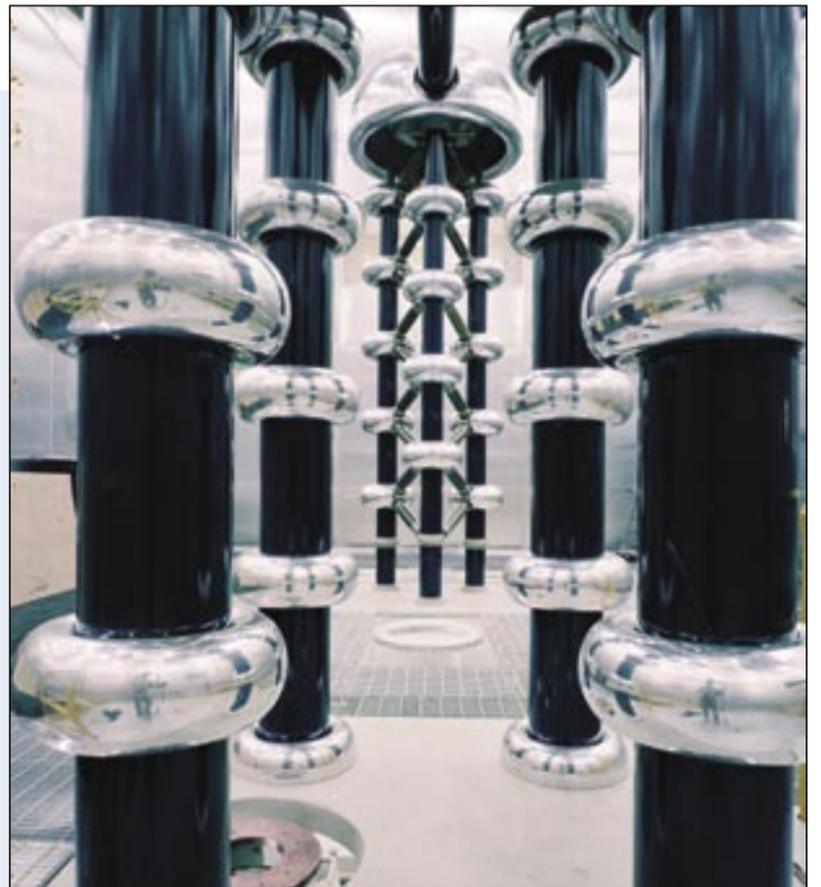
Biologists discover the power of neutrons

For nearly two decades, condensed matter and nuclear physics researchers at the Laboratory and from around the globe have used the pulsed beams of neutrons available at the Manuel Lujan Jr. Neutron Scattering Center for explorations into the microscopic structure of matter. Today, a “typical” Lujan Center user is just as likely to be working in the biological sciences as in more traditional areas such as polymer physics or geoscience. In fact, in 2005 more than one-third of Lujan users conducted bioscience or nanoscience research.

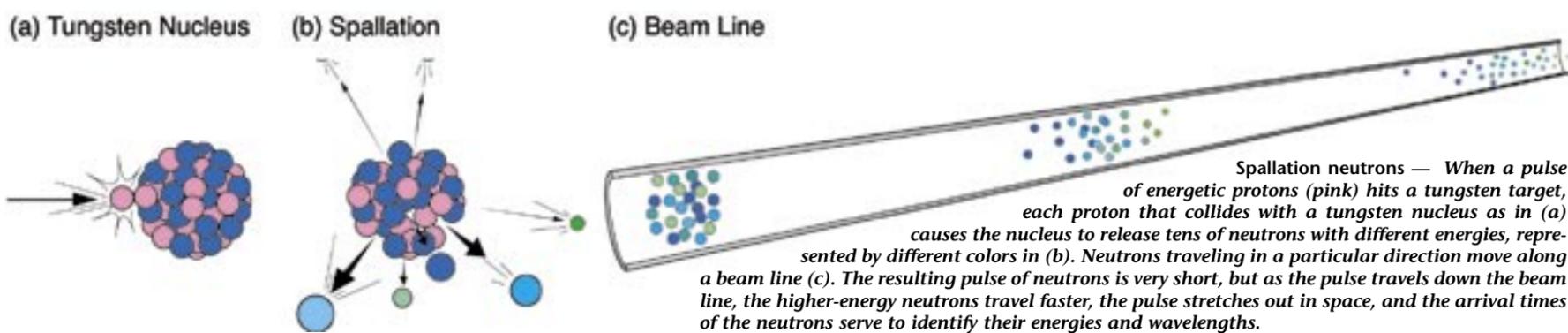
Over the past several years, neutron scattering techniques pioneered at Los Alamos have been used to explore a variety of bioscience questions, including those related to newborn babies, electrocution victims and soldiers in the modern battlefield. The Los Alamos Neutron Science Center (LANSCE) neutron source has proven that neutrons, once considered too weak to compete with synchrotrons for unraveling biological structures, have a unique capacity to locate crucial hydrogen atoms in proteins and cell membranes.

In 2001, researchers from the Institute for Biophysical Dynamics at the University of Chicago, along with researchers from University of California, Santa Barbara; Risø National Laboratory in Denmark; Advanced Inhalation Research/Alkermes in Cambridge, Mass.; and Martin Luther King Jr./Drew Medical Center at University of California, Los Angeles, used the Lujan Center to discover that a small protein in lung surfactant is needed by newborn babies to prevent collapsed lung. Lujan Center experiments show that a protein called SP-B is crucial to keeping the surfactant in a sufficiently fluid, highly wetting state. Neutron reflectivity of these

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Protons at the Los Alamos accelerator begin their journey here, in the domes at the top of three of the Cockcroft-Walton accelerators. By the time the particles leave this section, they have been accelerated to 7,440 miles per second (4 percent of the speed of light). From here, the beams pass through low-energy transport systems where they are steered, focused and bunched for injection into the second stage of the accelerator. *File photo*



Spallation neutrons — When a pulse of energetic protons (pink) hits a tungsten target, each proton that collides with a tungsten nucleus as in (a) causes the nucleus to release tens of neutrons with different energies, represented by different colors in (b). Neutrons traveling in a particular direction move along a beam line (c). The resulting pulse of neutrons is very short, but as the pulse travels down the beam line, the higher-energy neutrons travel faster, the pulse stretches out in space, and the arrival times of the neutrons serve to identify their energies and wavelengths.

Neutrons, neutrons, everywhere

Present in all known atomic nuclei, except the most common isotope of hydrogen, neutrons are uncharged elementary particles with slightly more mass than protons. As the veritable Swiss of the atomic world, these neutral subatomic particles have neither a positive nor negative charge, and therefore interact weakly with any molecules they pass through. This makes them ideal particles with which to probe the atomic and molecular structure of materials.

To free neutrons from their tight nuclear confinement and create a stream, or beam, of neutron-bearing pulses, the Los Alamos Neutron Science Center (LANSCE) proton storage ring receives a stream of high-intensity proton pulses from the one-kilometer LANSCE accelerator, compresses the pulses to be shorter, then sends them toward a tungsten target. As the proton pulses collide with the target, they break neutrons away from the nuclei of the target atoms. These neutrons are called spallation neutrons, which fly away from the target at the rate of about 20 neutrons for each original proton. The more intense the proton beam, the more neutrons released. These neutrons fly through slabs of water or hydrogen to slow them down, then down a “beam line” toward one of the several Lujan instruments, where they are used in neutron scattering and nuclear physics experiments.

The instrument suite at the Lujan Neutron Scattering Center consists of 16 instrumented neutron beam lines. Of this number, two beam lines are used primarily for nuclear physics research, leaving the remaining 14 for use by the international materials research community for such work as the study of elastic strain in metals and composites, structural studies of materials at high pressure, the characterization of the morphology of polymers and blends, understanding proteins, and the examination of the structure of protective layers, coatings and adhesives.

The Lujan Center is a source of innovation and a site of collaboration within the Laboratory. Scientists from the Materials Science and Technology (MST), Chemistry (C), Physics (P) and Theoretical (T) divisions work closely with Lujan Center staff to bring neutron scattering methods to bear on complex problems whose solutions often require the application of multiple techniques.

Lujan Center beam time is allocated twice a year through peer-review of proposals, with roughly 20 percent allocated to national security experiments in materials physics for nuclear weapons research and chemical and biological science for homeland defense. Approximately one-third of Lujan Center users conduct research in nanoscience or bioscience.

Lujan ...

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first part of our next run cycle beginning May 1. This is 20 percent more than for any comparable period.”

The Lujan Center, located at Technical Area 53, is one of four facilities and five experimental areas that comprise the Los Alamos Neutron Science Center (LANSCE) at the Laboratory. At the heart of LANSCE is an 800-million-electron volt proton accelerator, the most intense in the United States. The beam from this accelerator, in the form of pulses of protons, can supply beam to the Lujan Center, the Weapons Neutron Research Facility, the Isotope Production Facility and the Proton Radiography Facility, all simultaneously. Since its construction 33 years ago, LANSCE has been a leading facility for research in materials science and engineering, condensed-matter physics, chemistry, biology and geology.

In addition to the Department of Energy's Office of Basic Energy Sciences, LANSCE is sponsored by the National Nuclear Security Administration, the Office of Biological and Environment Research, the Office of Nuclear Energy and the Office of Industrial Technologies.

Biologist ...

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lung surfactants showed why certain molecules prevent collapse, which was important news for both physicians treating premature newborns and populations that may come to be exposed to respirable bio-threat agents.

Another team of researchers used the neutron scattering capability at LANSCE to better understand why electrocution victims often die several hours after their



The third and longest stage of the accelerator is the side-coupled-cavity linac, where protons are accelerated to their final energy of 800,000,000 electron volts, moving about 157,000 miles per second (84 percent of the speed of light).

exposure to high voltage and current due to cell membrane damage and leakage. The investigators are trying to develop a better understanding of a polymer called “ploxamer” and the mechanisms involved in its ability to seal cell membranes that have been compromised by trauma and diseases like electrical shocks, radiation injuries, thermal burns, frostbite and sickle cell disease, and ploxamer's inexplicable ability to gracefully exit the cell when the membrane integrity has been restored.

Another area of biological science in which neutrons have been applied is in the area of defenses against bio-toxins, where neutrons have been used to study the molecular attack strategy of peptides against various cell types (bacteria, viruses, red blood cells). The result has been knowledge about how to design a new wave of antibiotics that are more robust and with greater, longer-term efficacy against bioterrorism. A crucial step in these studies was to determine the structure of complex proteins, and the

instruments at the Lujan Center were critical in deciphering the full molecular structure.

In light of the Lujan Center's growing role in biophysics research, LANSCE will devote this year's annual Neutron Scattering School to studies of soft condensed matter and structural biology. Co-sponsored by the Laboratory, DOE's Office of Basic Energy Sciences, the National Science Foundation and New Mexico State University, the school will provide an overview and training in using neutron scattering for soft condensed matter studies and structural biology. The school, which is being held at the Lujan Center May 18 through May 26, will include basic neutron scattering experimental methods, data reduction and analysis techniques, and the opportunity for hands-on experiments. It is intended for graduate students and postdoctoral researchers working in the physical, chemical and biological sciences.

More information about the school is available at <http://lansce.lanl.gov/neutron-school/index2.html> online.

So... what do you think?

Q: How closely have you been following the transition activities leading up to Los Alamos National Security, LLC taking over the Lab's management contract on June 1? What interests you most so far — the benefits package discussions, the Lab's organizational structure, etc. — and why?



Jutta Kayser of Audits and Assessments (AA)

I visit the Transition Web site frequently, about two times a week and have also watched Mike Anastasio's presentations. My main concern was the future structure of our organization. The benefits

package also was a significant issue, as I am not vested.



Gilbert Rodriguez of Workforce Strategy and Development (HR-WSD, Plus Group contractor)

Since I am a retiree, I've been following as it relates to me. What I am concerned about is the fact that there is talk of having [retirees] pay for our health insurance directly rather than have the University of California's retirement plan pay the premium before sending out our retirement checks. If that is true it will become something else for me to think about.



Patsy Sanchez of the Principal Associate Director for Nuclear Weapons Programs (PADNWP)

Both, just to stay informed of everything that is going on. At least we know where we are going to be, so that is probably a relief to everyone.



Deborah Guffee of Information Technical Services (ENG-ITS)

Organizational structure. I think mostly because that is what we know the least about. That is the one thing that will change, and that is something we know very little about at this time.



Leisa Davenhall of Chemical Sciences and Engineering (C-CSE)

Actually, I have been concerned with the organizational structure, although it may be out of our control and a little disconcerting. As for my own organization, things have settled down and people know where they are going and things are working out.



Dave Foster of the Education and Postdoc Office (STB-EPO)

I have been very pleased with the coordination of the student/education focus that addresses the needs of the student postdocs as we go through the transition process. It has been very clear in

Director [Designate] Anastasio's statements that there is an important role that students and postdocs play in fulfilling our future technical needs here at the Lab.



Rasmussen a World Technology Network fellow

Steen Rasmussen of Hydrology, Geochemistry and Geology (EES-6) has been named a World Technology Network fellow in the biotechnology sector. Rasmussen is the first Los Alamos scientist to become a WTN fellow. He was nominated for the award as one of the top five innovators in the biotechnology category for his work on a radical design of a minimal self-replicating nanomachine.

Based in San Francisco, the WTN is an organization of professionals that focus on the business or science of bringing innovative new technologies of all types into reality. The WTN strives to build networks amongst technology innovators from fields as diverse as science, business, art, engineering, law and policy. The 700 members of the WTN are from more than 50 countries and are judged by their peers to be the most technologically innovative. All members of the WTN are former nominees of the WTN's annual World Technology Awards.



Steen Rasmussen

"I was suspicious when I received the initial nomination information," Rasmussen said of his nomination. "Some of my initial suspicion probably came from the massive amount of e-mail spam we receive on a daily basis, but some of my suspicion probably also came from my younger years where we were a circle of friends who often tried to pull each others legs by sending each other prank nominations, meeting requests, extra exams the university asked you to go to, and the like. It also feels a bit odd that the scientific questions we've been pursuing for so many years suddenly get recognized like this ... understanding life by creating it from scratch is perhaps still a bit radical in some circles but it is no longer unthinkable."

Fellows of the WTN are given lifetime memberships and elect the next year's nominees for the World Technology Awards. Rasmussen also will participate in interdisciplinary discussions headed by the WTN. "For instance [the WTN is] having an intriguing discussion on what globalization means to science and engineering," said Rasmussen. "WTN also has a focus on how to best utilize technology towards a more sustainable world as well as against poverty."

Rasmussen has his doctorate in physics from the Technical University of Denmark and has pioneered several approaches, methods and applications for self-organizing processes in natural and artificial systems. Currently, Rasmussen is team leader for the Self-Organizing Systems team at Los Alamos and his work has been showcased worldwide inside and outside of the scientific community.

In Memoriam

Gary Stelzer

Laboratory retiree Gary Stelzer died unexpectedly Feb. 2. He was 56.

Stelzer joined the Laboratory in 1970 in the Physics (P) Division. While at the Lab, he also worked in the former Personnel Services (PS), Controlled Thermonuclear Research (CTR) and Nonproliferation and International Security (NIS) divisions. Stelzer was working in Space Science and Applications (ISR-1) at the time of his retirement in 2005. He returned to the Lab as a Lab associate in Space and Remote Sensing Sciences (ISR-2) until March 2005.

He is survived by his two adopted children Shanna and Jonathon; brothers Jim of Accelerator, Beam and Spallation Physics (LANSCE-ABS) and Bob; and numerous other relatives.

Aloysius John Arko

Laboratory retiree Aloysius John Arko died Feb. 3. He was 65.

Arko joined the Laboratory in 1987 as a staff member in the Physics (P) Division. He retired in 2001 while working in Condensed Matter and Thermal Physics (MST-10). He was named a Fellow of the American Physical Society in 1989 and a Laboratory Fellow in 1999.

Arko received a bachelor's degree in physics from the Illinois Institute of Technology and a doctorate from Northwestern University in Evanston, Ill.

He is survived by his wife, Kristina; daughters Alenka Han of Denver and Maria Klemenc of Albuquerque, N.M.; son Michael of Reston, Va.; and four grandchildren. Also surviving are his siblings Mihaela Simrayh, Joze and Janez Arko, all of the Chicago area.

John Longer

Laboratory employee John Longer died Feb. 4. Longer was 49.

Longer worked in Weapon Response (ESA-WR). He came to the Laboratory in March 1984 as a health protection technician in the former Health, Safety and Environment (HSE) Division. While at the Laboratory, he also worked in the Nuclear Materials Technology (NMT) Division.

Longer received an associate's degree in nuclear technology from Texas State Technical Institute in Waco, Texas.

He is survived by his three children, Andy of Albuquerque, Daniel of Los Alamos and Maria of Wyoming; and a sister, Mary Canon of Mexia, Texas.

Lucille Mavis Haley

Laboratory retiree Lucille Mavis Haley died Feb. 14. She was 81.

Haley began her career with the Laboratory in October 1953 as a stores record clerk in the former Supply and Property (SP) Division. She also worked in the former Materials Management (MAT) Division, where she retired as associate group leader in July 1986.

Haley is survived by children Luanne Buden and Bob Brush of Albuquerque; five grandchildren and one great-grandchild.



March employee service anniversaries

35 years

Fidel Maestas, HSR-8
Patrick Martinez, MSM-6
Gary Wall, X-4

30 years

Susan Duran, MST-DO
William Haag, N-2
Carolyn Mangeng, ADTS
Angie Martinez, PADNWP
Lilly Silva, PADNWP
Leslie Trujillo, S-9
Mark Wilder, B-2

25 years

Trinnie Archuleta, MSM-TIS
Jane Beck, SUP-8
Nancy Boudrie, X-1
Gregory Canavan, P-DO
Charles Davis, NMT-16
Brenda Griego, NMT-2
Laurie Hixson, ISR-CSSE
Laura Jarvinen, SR-OPS

Michael Maloney, HSR-8
Frank Pabian, N-3
Wayne Taylor, NMT-11
Michelle Thomsen, ISR-1
Kurt Tiefert, CFO-2
Susan Whittington, T-3

20 years

Maria De-La-Torre-Garcia, C-AAC
Stuart Flicker, N-3
Joyce Guzik, X-2
Jeffery P. Hill, ESA-WDS
Jeffrey O. Hill, LANSCE-IC
Craig Idler, CCN-7
Doreen Lawrence, CCN-1
Paul Martinez, MST-6
Steven Painter, CCN-12
William Radzinski, FM-MSE
Richard Salazar, NMT-5
Mark Schmitt, X-1-SEC6
Tsutomu Shimada, P-24
Joe Silva, MSM-6

Terry Taddeucci, LANSCE-NS

15 years

Andrew Dubois, CCN-9
Christopher Fresquez, SUP-8
Richard Klamann, D-1
Luis Pocaterra, NMT-1
Jay Sessions, X-2

10 years

Susan Barns, B-1
John Gordon, SSR
William Hinckley, P-22
Darren Knox, SUP-9
Janet Marchi, HSR-7
L. Christine Rodriguez, NMT-2
Jose Velarde, P-24
Theresa Wilson, X-4

5 years

Michael Adkins, ENG-PSE
Josie Alderete, DX-TSO

Alan Archuleta, CCN-1
Steven Baca, PM-IP
Jeffrey Click, CCN-2
Robert Funkhouser, T-10
Dwain Glidewell, DX-3
Manuel Gonzales, N-1
Sheng Gu, B-2
Timothy Irwin, ISR-5
Il-Kyoung Jeong, MST-10
Prabhu Khalsa, CCN-7
Snezana Konecni, ESA-WR
Benjamin Martinez Jr, FM-MSE
Joe Martinez, NMT-2
Mel Montoya, FM-NMT
Theodore Morris, TT
Lawrence Souza, PS-1
Richard Strelitz, CCS-1
Alfred Torrez, CCN-12
Blas Uberuaga, MST-8
Penny Van Pelt, SSMO
Julie Vigil, CCN-3
Travis Weaver, ESA-TSE
Robert White, ISR-1

Employees reminded ...

continued from Page 3

they make on the LANS Total Compensation Package Election Form (see below).

- LANS Offer Letter: This letter states the organizational assignment and salary being offered to an employee, and includes employment provisions.
 - LANS Offer Acceptance Form: Employees must complete this document to indicate that they accept or decline the LANS offer and authorize LANS to access employee personnel and medical records. The form requires a signature and date.
 - LANS Total Compensation Package Election Form: This form requires employees who accept employment with LANS to indicate whether they elect to participate in Total Compensation Package 1 or 2. Total compensation Package 1 is a defined-benefit plan that is substantially equivalent to the University of California Retirement Plan. Total compensation Package 2 is a market-driven defined-contribution plan. Employees must sign and date the Total Compensation Package Election Form if they accept employment with LANS.
 - LANS Employment Form: This form requires employees who accept employment with LANS to provide their name, address and phone numbers. Employees must sign and date the form to acknowledge understanding of and agreement with the stated employment conditions.
 - IRS W-4 Form: This form requires employees to indicate salary withholding levels and exemptions for LANS payroll processing.
- Employees who decline LANS employment must return the signed and dated LANS Offer Acceptance form and the UC Decision Form. Prototype offer and acceptance letters that call attention to key features of the two documents are available at <http://www.lanl.gov/>

news/newsbulletin/pdf/LANSLettersSAMPLE.pdf online and will be posted on the Laboratory's Transition Web Site transition.lanl.gov online.

Consideration period

Employees have until May 15 to decide whether to accept employment with LANS. The May 15 deadline is when LANS must have employees' packages in hand.

LANS has provided four delivery options for employees to return their packages:

- 1) In person in the basement lobby of the Otowi Building at Technical Area 3;
- 2) A drop box in the basement lobby of the Otowi Building at TA-3;
- 3) To LANL Mail Stop T009
- 4) By the U.S. Postal Service to:
Los Alamos National Security, LLC
c/o Los Alamos National Laboratory
TA-3/SM4200/Mail Stop T009
Los Alamos, NM 87545
Attention: LANS Human Resources

Employees who select the mail options should ensure that they provide enough time for the employment package to arrive at LANS by the May 15 deadline; a May 15 postmark is not sufficient for compliance.

More information about the packages and the process can be found on the LANS Transition Web site.

Employees who have LANS employment questions can contact the LANS Transition Hotline at 1-888-505-9292.

UC Laboratory students will receive a separate employment package by March 31, 2006. Additional information for students will be posted on the [Laboratory's] Transition Web site and published in the Daily Newsbulletin.

LOS ALAMOS National Security LLC

Offer Letter

Your salary and current contractual status remain the same. March 15, 2006. Your organizational assignment.

We are pleased to offer you employment with Los Alamos National Security, LLC (LANS) at your current base salary, series, and level in Directorate [], Division [], Group []. If you accept this offer, your employment with LANS will begin June 1, 2006. The employment category you are in with the University of California (UC) on May 31, 2006, will be your initial employment category with LANS. Examples of employment categories are: Regular, Limited Term, Post Doctorate, Full Time, Part Time, Casual, employees on leave of absence, etc. If you are on a disability leave status on May 31, 2006, your employment date will be the date you report to work with LANS, assuming you would have been eligible to return to work had UC remained the LANS contractor.

In the coming weeks, a series of meetings will be scheduled by the Associate Director of the organization identified above to discuss organizational positions, roles, and responsibilities. You will be advised before June 1, 2006, if your work location is changing.

Please note the following:

- This offer is contingent on your being in "good standing" with UC. Employees in "good standing" are those individuals who are on the UC payroll as of May 31, 2006, except:
 1. Employees who have been notified of UC's intent to terminate their employment for cause per AM 112, "Discipline Policy and Procedures," or
 2. Employees who have notified UC of their intent to terminate.
- This offer is contingent on your remaining in an active employment status through May 31, 2006. If you do elect to retire from UC on or before June 1, 2006, you may be considered for employment with LANS after hiring of the incumbent UC-LANL employee has been completed. Interested retirees who wish to be considered for subsequent available positions may submit a LANS employment application after they retire. The LANS application is available at www.lanl.gov.
- For your reference, the NNSA-approved LANS Employee Benefits Summary is available at www.lanl.gov. Please note, this LANS Employee Benefits Summary, together with the plan details made available on the web site and in mailings following NNSA approval, is the complete description of the benefits being offered to you and supersedes all prior information regarding these benefits that may have been provided to you.

Please carefully review the content of this letter and the following enclosures. To accept this offer of employment, you must complete, sign, date, and return the following documents to LANS Human Resources:

1. LANS Offer Letter
2. LANS Offer Acceptance Form
3. LANS Total Compensation Package Election Form
4. LANS Employment Form
5. IRS Tax Form W-4
6. UC Decision Form

Documents you must return to accept LANS employment.

LOS ALAMOS National Security LLC

Offer Acceptance Form

You may return these documents at any time by one of the following methods:

1. Drop Box in the basement lobby of the Otowi Building
2. In person in Otowi Building, North Wing Basement Monday - Friday, 7 a.m. - 5 p.m.
3. Mail Stop: T009
4. US Mail to:
Attention: LANS Human Resources
Los Alamos National Security, LLC
% Los Alamos National Laboratory
TA-3/SM4200, Mail Stop T009
Los Alamos, NM 87545

Where to return documents

LANS must have your documents in hand no later than May 15.

The required documents must be received by LANS HR no later than 5 p.m. Mountain Time on May 15, 2006, at which time this offer of employment expires. Please return only the signed and dated Offer Acceptance Form and the UC Decision Form if you elect to decline employment with LANS.

If you have questions regarding employment with LANS, please contact us through the LANS Transition Hotline at 1-888-505-9292 or submit your question to <http://www.lanl.com/transition.htm>.

We look forward to your joining the LANS Team.

Sincerely,

Mary P. O'Donnell
LANS Human Resources
Division Leader

Your authorization for LANS to access LANS personnel and medical records.

By accepting this offer of employment with LANS, I acknowledge that my existing employment-related records (personnel and medical) will remain at the Laboratory under LANS's control as of June 1, 2006, as a system of records subject to the provisions of the Federal Privacy Act. To allow LANS to access these records, however, I hereby waive any restrictions on disclosure of this information by the University of California to LANS that might exist under the California Information Practices Act.

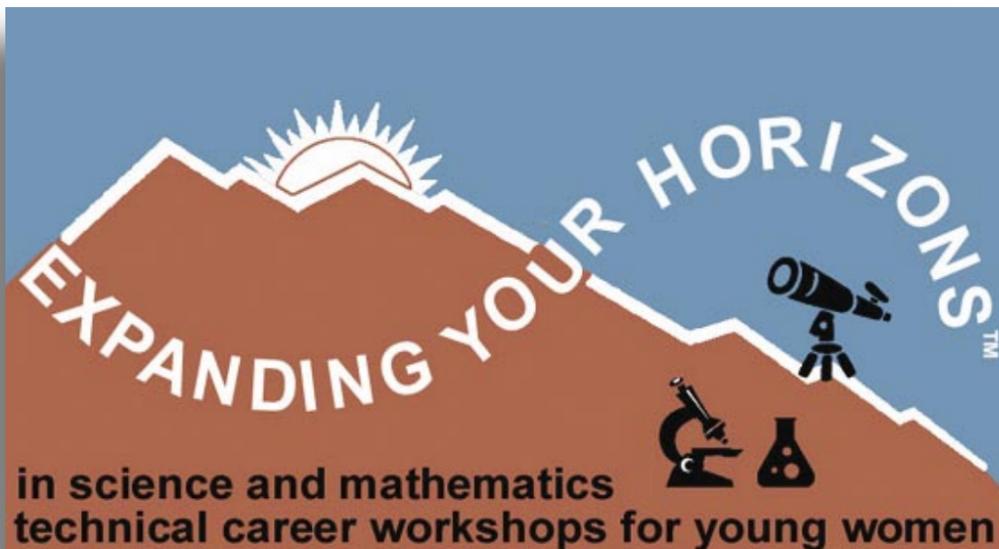
I accept the LANS offer of employment described in this document.
 I do not accept the LANS offer of employment described in this document.

Signature: _____ Date: _____
Name: _____ Z Number: _____

Only two forms required to decline LANS employment.



Workshop emphasizes a choice and passion for science



by Sallie Boorman

Young women in Northern New Mexico discovered the possibilities that science, engineering, math and technology offer during the annual Expand Your Horizons Workshop at the University of New Mexico, Los Alamos. The annual conference was co-sponsored by the Laboratory, Los Alamos Women in Science and UNM-LA.

EYH is a technical career workshop for young women designed to promote the advancement of science and mathematics education while also providing girls in the region with real examples of women professionals in the STEM (science, technology, engineering and mathematics) fields. The workshop targets girls, grades eight through 10, in hopes of creating a drive and passion for science that will lead to interest in developing a career in the same direction.

Representing 17 schools in Northern New Mexico, 150 girls packed into the UNM-LA conference room eager to start the day. Aviva Sussman of Geophysics (EES-11), coordinator of this year's EYH conference, welcomed the girls and explained to them the importance of their involvement in science as women. "We [EYH staff] are here today because we believe in you. We believe you are the future of science, technology, engineering and mathematics," said Sussman. "[We] want to give you a taste of what it means to be a scientist."

The girls began the morning by stepping into the shoes of a geologist with the team Geology Challenge. Under a time limit, teams were given a box of different minerals, which they had to classify according to their 'hardness.' Then, by using a chart and model play-doh, they unraveled the history of a landscape (also called 'geo-sequencing') by observing the timing relationships between layers of rock and sediment, faults and folds.

After being geologists, girls broke into smaller workshops according to their interests. The workshops covered a wide range of disciplines and provided the girls an opportunity to realize the diversity of career options available in the STEM fields. Topics included Web design, architecture, chemistry, forensics, math fractals, dentistry, small animal veterinary work, biology, engineering, cryptology and DNA. The small workshops also give the girls a chance to have a one-on-one experience with professional women in technical fields who could talk to the girls about their experiences in becoming scientists.

Haley Ritchey, a Los Alamos dentist, led the "450 Nanometers of Light — The Catalyst to a Great Smile" workshop. She talked to her young audience about her journey through school and the dental field and the ability to choose and personalize your career. "When you choose specialization, that is all you do. For example, if you wanted to do orthodontics, you could only do that," said Ritchey. "But because I loved all of it, I chose not to specialize so that I could keep practicing everything."

The emphasis of choice and passion for science was a theme that ran throughout the day. Keynote speaker geologist Claudia Lewis of Environmental Geology and Spatial Analysis (EES-9) carried this theme throughout her keynote address titled "From Science Phobia to Scientist: Advice From a Black Sheep."

"If I could leave you with just one key note, it would be to follow your passion," said Lewis.

Lewis, whose own path toward a doctorate in geology was full of twists and turns, confessed, "It was no mystery. Science and math scared the heart out of me ... I thought that I couldn't do science and math, but I found that I really loved it." Originally getting her bachelor's in American studies, Lewis talked about how she faced science and math in school. She said when she found she really loved geology, she overcame her fear and found a life and job that she was passionate about. She talked to the girls about how not all science is found in the lab, detailing her adventures in Baja, Calif., Spain and in New Mexico where she made friends from around the world.

"It is never too early or too late to make progress toward your passion," said Lewis. "There will be obstacles in your journey, but there is always a way around them if you look ... It is all about having the right attitude."



Students test the spatter of 'blood' in the "Blood Drops Tell Tales" student workshop, where they discover how forensic scientists can use blood residue left at a scene of a crime. The shape of blood drops can provide clues about how a drop of blood fell. During this workshop students tested dropping blood at different heights, angles and on different materials, keeping track of how the result looked. By using math, students learned that forensic scientists can determine the trajectory, force and sometimes the method behind a crime.



Vanessa Quintana of Monte del Sol Charter School adds food coloring to her mixture during the "Wonders of Polymer" small workshop where the girls learned the properties of polymers and their significance in the world and got to create their own polymer. The food coloring was just for fun and Quintana's turned out purple.



Kathy Prestridge, left, of Neutron Science and Technology (P-23) helps Veronica Saeger of Los Alamos Middle School translate a geography chart during the Team Geography Challenge.

Photos by Ed Vigil